

November 18, 2002

Re: Superior Aluminum Alloys 003-15914-00286

TO: Interested Parties / Applicant

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within (18) eighteen days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) the date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for consideration at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosure



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
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November 18, 2002

Mr. Brian Winters
Superior Aluminum Alloys
P.O. Box 678
New Haven, Indiana 46774

Re: 003-15914-00286
Minor Source Modification to:
Part 70 permit No.: T003-11452-00286

Dear Mr. Winters:

Superior Aluminum Alloys was issued Part 70 operating permit T003-11452-00286 on June 24, 2002 for stationary secondary aluminum production plant. An application to modify the source was received on July 19, 2002. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

One (1) natural gas-fired Reverberatory Furnace, identified as furnace #4, with a maximum capacity of 28,000 pounds of aluminum scrap per hour, a chlorine flux of 10,233 pounds per eight-hour charge, and a heat input capacity of 28 MMBtu/hr, with emissions controlled by fabric filter baghouse N equipped with continuous lime injection, exhausting to stack N.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.



This minor source modification authorizes construction of the new emission units. Operating conditions will be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5 and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Bob Sidner, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (703) 633-1701 to speak directly to Mr. Sidner. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments

ERG/BS

cc: File - Allen County
Allen County Health Department
Air Compliance Section Inspector - Jennifer Dorn
Compliance Data Section - Karen Nowak
Administrative and Development - Sara Cloe
Technical Support and Modeling - Michele Boner



Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
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PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Superior Aluminum Alloys, L.L.C.
14214 Edgerton Road
New Haven, Indiana 46774**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T003-11452-00286	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: Expiration Date:

1st Minor Source Modification No.: T003-15914-00286	Pages Affected:
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: November 18, 2002



SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary, secondary aluminum production plant.

Responsible Official:	CEO & President, Superior Aluminum Alloys
Source Address:	14214 Edgerton Road, New Haven, Indiana 46774
Mailing Address:	P O Box 678, New Haven, IN 46774
Phone number:	(219) 749-7599
SIC Code:	3341
County Location:	Allen
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (a) Four (4) natural gas-fired Reverberatory Furnaces, identified as furnace #1 (constructed in 2002), furnace #2 (constructed in 2001), furnace #3 (constructed in 2000) and furnace #4 (to be constructed), each with: a maximum capacity of 28,000 pounds of aluminum scrap per hour, chlorine flux of 10,233 pounds per eight-hour charge, and a heat input capacity of 28 MMBtu/hr, emissions controlled by four (4) fabric filter baghouses with lime injection (baghouses E and F are manually lime injected, baghouses L and N are equipped with continuous lime injection), with furnaces #1 and #2 exhausting to stacks E and F, furnace #3 exhausting to stack L, and furnace #4 exhausting to stack N, respectively.
- (b) One (1) Scrap Shredder, identified as unit C, constructed in 1998, with a maximum capacity of 25,000 pounds aluminum scrap per hour, with emissions controlled by fabric filter baghouse C (exhausting indoors).
- (c) One (1) Scrap Dryer, identified as unit D, constructed in 1998, with a maximum drying capacity of 12,000 pounds aluminum scrap per hour and 6 MMBtu/hr, with emissions controlled by fabric filter baghouse D with manual lime injection and a 12 MMBtu/hr afterburner, and exhausting to stack D.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Cleaners and solvents characterized as follows: A) having a vapor pressure equal to or less than 2kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100 degrees F) or; B) having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at

20 degrees C (68 degrees F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months. [326 IAC 8-3-2]

- (b) The following equipment related to manufacturing activities not resulting in the emission of HAPs; brazing equipment cutting torches, soldering equipment, welding equipment. [326 IAC 6-3-2]

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Furnaces

- (a) Four (4) natural gas-fired Reverberatory Furnaces, identified as furnace #1 (constructed in 2002), furnace #2 (constructed in 2001), furnace #3 (constructed in 2000) and furnace #4 (to be constructed), each with: a maximum capacity of 28,000 pounds of aluminum scrap per hour, chlorine flux of 10,233 pounds per eight-hour charge, and a heat input capacity of 28 MMBtu/hr, emissions controlled by four (4) fabric filter baghouses with lime injection (baghouses E and F are manually lime injected, baghouses L and N are equipped with continuous lime injection), with furnaces #1 and #2 exhausting to stacks E and F, furnace #3 exhausting to stack L, and furnace #4 exhausting to stack N, respectively.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] [40 CFR 52.21]

The following conditions apply to Reverberatory Furnaces #1 through #4.

- (a) The combined input of aluminum scrap to reverberatory furnaces #1, #2, #3, and #4 shall not exceed 300,000,000 pounds per twelve consecutive month period. This aluminum feed/charge limit, in combination with the unlimited NO_x emissions from the Scrap Dryer, and Melt Pots, will effectively limit the source's potential to emit nitrogen oxides (NO_x) to less than 100 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) NO_x emissions from each of the reverberatory furnaces #1, #2, #3, and #4 shall not exceed 0.25 pounds per ton of aluminum charged and 0.01 pounds per ton of aluminum poured/cast.
- (c) The amount of flux used in each furnace shall be limited to 11,205,135 pounds per twelve consecutive month period with compliance determined at the end of each month.
- (d) The PM emissions from each furnace (Reverberatory Furnaces #1 through #4) shall not exceed 0.1 pounds per ton aluminum melted.
- (e) The PM10 emissions from each furnace (Reverberatory Furnaces #1 through #4) shall not exceed 0.1 pounds per ton aluminum melted.

Compliance with these limits render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.1.2 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to reverberatory furnaces #1, #2, #3, and #4 except when otherwise specified in 40 CFR Part 63, Subpart RRR.

D.1.3 Secondary Aluminum Smelting Limits [40 CFR Part 63.1500 (Subpart RRR)]

Pursuant to 40 CFR Part 63.1505, the following conditions shall apply to the reverberatory furnaces #1, #2, #3, and #4.

- (a) The Permittee shall be in compliance with the following emission limitations and operating requirements upon startup:

- (1) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of PM in excess of:

$$L_{cPM} = \frac{\sum_{i=1}^n (L_{tiPM} \times T_{ti})}{\sum_{i=1}^n T_{ti}}$$

where L_{tiPM} = The PM emission limit for individual emission unit in the secondary aluminum processing unit I in paragraph (i)(1) and (2) of 40 CFR 63.1505.
 T_{ti} = The feed/charge rate for individual emission unit I; and
 L_{cPM} = The PM emission limit for secondary aluminum processing unit I.

The PM emission limit (L_{cPM}) for a Group 1 furnace without an in-line fluxer (each reverberatory furnace) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

- (2) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of HCl in excess of:

$$L_{cHCl} = \frac{\sum_{i=1}^n (L_{tiHCl} \times T_{ti})}{\sum_{i=1}^n T_{ti}}$$

where L_{tiHCl} = The HCl emission limit for individual emission unit in the secondary aluminum processing unit I in paragraph (i)(4) of 40 CFR 63.1505.
 T_{ti} = The feed/charge rate for individual emission unit I; and
 L_{cHCl} = The HCl emission limit for secondary aluminum processing unit I.

The HCl emission limit (L_{cHCl}) for a Group 1 furnace without an in-line fluxer (each reverberatory furnace) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

- (3) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of total tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans (D/F) in excess of:

$$L_{cDF} = \frac{\sum_{i=1}^n (L_{tiDF} \times T_{ti})}{\sum_{i=1}^n T_{ti}}$$

where

$L_{iD/F}$ = The D/F emission limit for individual emission unit in the secondary aluminum processing unit; and

$L_{cD/F}$ = The D/F emission limit for secondary aluminum processing unit.

The D/F emission limit ($L_{cD/F}$) for a Group 1 furnace without an in-line fluxer (Reverberatory Furnaces #1 through #4) at a secondary aluminum production facility shall be 15 micrograms of D/F TEQ per megagram (2.1×10^{-4} gr of D/F TEQ per ton) of feed/charge. Where TEQ is the toxicity equivalents for dioxins and furans as defined in 40 CFR 60.2125 (July 2001) [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

- (b) Identification, emission limits and means of compliance shall be posted on the reverberatory furnaces #1, #2, #3, #4.

D.1.4 Labeling [40 CFR Part 63.1506(b)]

The owner or operator shall provide and maintain easily visible labels that shall be posted at the furnaces. Said labels shall identify the applicable emission limits and means of compliance, including:

- (a) the type of affected source or emission unit (e.g., scrap dryer/delacquering kiln/decoating kiln, group 1 furnace, group 2 furnace, in-line fluxer); and
- (b) the applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.

D.1.5 Capture and Control Systems [40 CFR Part 63.1506(c)]

Pursuant to 40 CFR 63.1506(c), the owner or operator of the furnaces must:

- (a) Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (incorporated by reference: 40 CFR 63.1502)
- (b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and
- (c) Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

D.1.6 Operation, Maintenance, and Monitoring (OM&M) Plan [63.1510(b)]

The owner or operator must prepare and implement for each furnace, a written operation, maintenance, and monitoring (OM&M) plan. The owner or operator must submit the plan to the applicable permitting authority within 90 days after a successful initial performance test under 40 CFR 63.1511(b). Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, the owner or operator must comply with the provisions of the submitted plan. Each plan must contain the following information:

- (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (b) A monitoring schedule for each affected source and emission unit.
- (c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in §63.1505.
- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - (1) Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
 - (2) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in subpart A of this part.
- (e) Procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
- (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in 40 CFR 63.1510(b)(1), including:
 - (1) Procedures to determine and record the cause of an deviation or excursion, and the time the deviation or excursion began and ended; and
 - (2) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

D.1.7 Particulate [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each reverberatory furnace shall not exceed 24.0 pounds per hour when operating at a process weight rate of 14.0 tons of per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their baghouses. If the OM&M plan required by condition D.1.6 is developed in accordance with Section B- Preventive Maintenance Plans, then after the OM&M plan has been approved, it shall satisfy the requirements of this condition.

Compliance Determination Requirements

D.1.9 Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 63 Subpart RRR]

- (a) In order to demonstrate compliance with 40 CFR Part 63 Subpart RRR, 40 CFR 52.21, and 326 IAC 2-2, the Permittee shall, within 90 days after startup, perform PM and PM10 testing on baghouses E, F, and N, and NO_x, HCl, and D/F testing on reverberatory furnaces #1, #2, and #4, using methods as approved by the Commissioner, in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. When testing baghouses E and F, reverberatory furnaces #1 and #2 shall be operated at 95% or more of their maximum design capacities. When testing baghouse N, reverberatory furnace #4 shall be operated at 95% or more of its maximum design capacity. PM10 includes filterable and condensable PM10. Testing shall be conducted in accordance with Section C- Performance Testing. These tests shall be repeated every two and one-half (2.5) years.
- (b) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [63.1511(g)].

D.1.10 Particulate Matter (PM) and Capture/Collection Systems [40 CFR 63.1506(c)]

Pursuant to CP-003-9243-00286, issued on May 1, 1998, Source Modification 003-11927-00286, issued on June 7, 2000, and in order to comply with Conditions D.1.1, D.1.3, D.1.5, and D.1.7, the capture/control system (baghouses) for PM control shall be in operation and control emissions from the furnaces at all times that the furnaces are in operation according to the procedures and requirements of the OM&M plan. Baghouse L for PM control shall be in operation and control emissions from furnace #3 at all times when furnace #3 is in operation. Baghouse N for PM control shall be in operation and control emissions from furnace #4 at all times when furnace #4 is in operation. It is acceptable to operate only one of the baghouses E or F if only one of the two reverberatory furnaces #1 and #2 is operating. If both reverberatory furnaces #1 and #2 are operating, then both baghouses E and F must be operated.

D.1.11 Feed/Charge Determination [40 CFR 63.1506(d)]

Pursuant to 40 CFR 63.1506, the Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The Permittee shall operate each measurement system or other weight determination procedure in accordance with the Operation, Maintenance, and Monitoring Plan. Alternatively, the Permittee may choose to measure and record aluminum production weight from an affected emission unit rather than feed/charge weight provided that the aluminum production weight is measured for all emission units within a secondary aluminum processing unit and all calculations to demonstrate compliance with the emission limits for secondary aluminum processing units are based on aluminum production weight rather than feed/charge weight.

D.1.12 Secondary Aluminum Smelting Compliance Determination [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1510, the following conditions shall apply to reverberatory furnaces #1, #2, #3, and #4:

- (a) For each furnace, the Permittee shall [63.1506(m)]:
- (1) Initiate corrective action within one (1) hour of a bag leak detection system alarm; complete the corrective action procedures in accordance with the Operation, Maintenance, and Monitoring Plan; and operate each fabric filter system such that the bag leak detection system alarm does not sound more than five (5) percent of the operating time during a six (6) month reporting

period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than one (1) hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.

- (2) Maintain the three (3) hour average inlet temperature for each fabric filter at or below the average temperature established during the performance test plus 25 degrees F.
 - (3) For a continuous-lime injection system, the Permittee shall maintain free-flowing alkaline agent in the hopper to the feed device at all times and maintain the alkaline agent feeder setting at the same level established during the performance test. For the purposes of this rule lime means calcium oxide or other alkaline reagent; and lime-injection means the continuous addition of lime upstream of the fabric filter.
 - (4) Maintain the total reactive flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.
- (b) The Permittee shall use a continuous lime-injected fabric filter to comply with the requirements of 40 CFR 63, Subpart RRR; and therefore must [40 CFR 63.1510(i)]:
- (1) Verify that the lime (or other alkaline agent) is always free-flowing by: Inspecting the feed hopper or silo at least once each eight (8) hour period and recording the results of each inspection. If the lime or other alkaline agent is found not to be free-flowing during any of the eight (8) hour periods, the Permittee shall increase the frequency of inspections to at least once every four (4) hour period for the next three (3) days. The Permittee may return to inspections at least once every eight (8) hour period if corrective action results in no further blockages of lime or other alkaline agent during the three (3) day period.
 - (2) The Permittee shall also record the feeder setting once each day of operation.
- (c) Pursuant to 40 CFR 63.1510(j), for all furnaces at this source, the Permittee shall [40 CFR 63.1510(j)]:
- (1) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or reactive liquid flux injected into each furnace. The monitoring system must record the weight for each fifteen (15) minute period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test. The accuracy of the weight measurement shall be within one (1) percent of the weight of the reactive component of the flux being measured. The Permittee may apply to IDEM, OAQ to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of within one (1) percent accuracy impracticable. The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.

- (2) Calculate and record the flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).
 - (3) Record, for each fifteen (15) minute time period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of reactive flux.
 - (4) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test.
- (d) An owner or operator of a secondary aluminum processing unit at a facility must include, within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the following information [40 CFR 63.1510(s)(1)]:
- (1) The identification of each emission unit in the secondary aluminum processing unit;
 - (2) The specific control technology of pollution prevention measure to be used for each emission unit in the secondary aluminum processing unit and the date of its installation or application;
 - (3) The emission limit calculated for each secondary aluminum processing unit and performance test result with supporting calculations demonstrating initial compliance with each applicable emission limit;
 - (4) Information and data demonstrating compliance for each emission unit with all applicable design equipment work practice or operational standards of Subpart RRR; and
 - (5) The monitoring requirements applicable to each emission unit in a secondary aluminum processing unit and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR 63.1510(t).
- (e) The SAPU compliance procedures within the OM&M plan may not contain any of the information provided in 40 CFR 63.1510(s)(2)(i) through (iv). [40 CFR 63.1510(s)(2)]

The completion of the initial performance tests for the secondary aluminum processing units shall be considered to be the date of approval of the Operation, Maintenance and Monitoring Plan by IDEM, OAQ [63.1506(a)(2)].

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.13 Labeling [40 CFR 63.1510(c)]

The owner or operator shall, for each furnace, inspect the labels required in Condition D.1.4 at least once per calendar month to confirm that the posted labels as required by the operational standard in 40 CFR 63.1506(b) are intact and legible.

D.1.14 Capture/Collection System [63.1510(d)]

The owner or operator shall, for the furnaces, inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in 40 CFR 63.1506(c) and record the results of each inspection.

D.1.15 Feed/Charge Determination [40 CFR 63.1510(e)]

The owner or operator of the furnaces must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from each

furnace emission unit over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured.

D.1.16 Fabric Filter Monitoring Requirements [40 CFR 63.1510(f)]

These requirements apply to the owner or operator of each reverberatory furnace listed in this section.

- (a) The owner or operator must install and operate a bag leak detection system for each exhaust stack of a fabric filter.
- (b) Each triboelectric bag leak detection system must be installed, calibrated, operated, and maintained according to the "Fabric Filter Bag Leak Detection Guidance," (September 1997).
- (c) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
- (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings.
- (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.
- (f) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.
- (g) For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.
- (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
- (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.
- (j) Following initial adjustment of the system, the owner or operator must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time except as detailed in the OM&M plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition.

D.1.17 Fabric Filter Inlet Temperature Monitoring Requirements [40 CFR 63.1510(h)]

- (a) The owner or operator must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases entering baghouses E, F, L and N consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A.
- (b) The temperature monitoring device must meet each of these performance and equipment specifications:

- (1) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period.
- (2) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1512(n).
- (3) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

D.1.18 Corrective Action [40 CFR 63.1506(p)]

When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established and incorporated in the OM&M plan, the owner or operator shall initiate corrective action. The corrective action taken, shall restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

In addition, the corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level(s) to the applicable value or range of values, and steps to prevent the likely recurrence of the cause of a deviation.

D.1.19 Compliance Monitoring Requirements [40 CFR 63.1510(t)] [40 CFR 63.1510(u)]

Pursuant to 40 CFR 63, Subpart RRR, on or after the date of the initial performance test is required to be completed, the Permittee shall monitor all emission units and control equipment according to the following requirements [63.1510(a)]:

- (a) The Permittee shall calculate and record the 3-day, 24- hour rolling average emissions of PM, HCl, and D/F for each furnace on a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee shall:
 - (1) Calculate and record the total weight of material charged to each furnace for each 24-hour day of operation using the feed/charge weight data collected as required under Subpart RRR.
 - (2) To provide emissions for each furnace for the 24-hour period, in pounds: multiply the total feed/charge weight to the furnace or the weight of aluminum produced by the furnace for the 24-hour period, by the emission rate (in lb/ton of feed/charge) for that furnace (as determined during the emission test).
 - (3) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3.
- (b) As an alternative to the procedures in (a)(1) above, the Permittee may demonstrate through performance tests, that each individual furnace is in compliance with the applicable emission limit [40 CFR 63.1510(u)].

D.1.20 Parametric Monitoring

The Permittee shall record the total static pressure drop across baghouses E, F, L, and N, used in conjunction with the furnaces, at least once per shift when any of the furnaces are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from

this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.21 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the furnaces when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

D.1.22 Broken or Failed Bag Detection

In the event that bag failure has been observed.

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.23 Record Keeping Requirements

- (a) To document compliance with D.1.1, the Permittee shall maintain records of the total scrap aluminum and flux charged to each reverberatory furnace for each 12 consecutive month period.
- (b) To document compliance with Condition D.1.20, the Permittee shall maintain records of the inlet and outlet differential static pressure once per shift during normal operation when venting to the atmosphere
- (c) To document compliance with Condition D.1.21, the Permittee shall maintain records of the results of the inspections required under Condition D.1.21.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.24 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1517 the owner or operator shall:

- (a) As required by 40 CFR 63.10(b), the owner or operator shall maintain files of all information (including all reports and notifications) required by the general provisions and Subpart RRR.
- (b) The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.
- (c) The owner or operator may retain records on microfilm, computer disks, magnetic tape, or microfiche; and report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.
- (d) In addition to the general records required by 40 CFR 63.1510(b), the owner or operator of a furnace with a lime-injected fabric filter must maintain records of:
 - (1) The number of total operating hours for the affected source or emission unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.
 - (2) The following regarding lime injection:

Records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken;
 - (3) For each group 1 furnace at this source, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.
 - (4) For each continuous monitoring system, records required by 40 CFR 63.10(c).
 - (5) For each furnace, weights for each operating cycle or time period used in the performance test.
 - (6) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.
 - (7) Records of annual inspections of emission capture/collection and closed vent systems.
 - (8) Records for any approved alternative monitoring or test procedure.
 - (9) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (i) Startup, shutdown, and malfunction plan;

- (ii) For major sources, OM&M plan; and
 - (iii) Site-specific secondary aluminum processing unit emission plan.
- (10) For each furnace, records of total charge weight for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.

D.1.25 Secondary Aluminum Production Reporting Requirements [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR 63.1510 and 63.1516 the owner or operator shall:

- (a) Submit initial notifications, upon startup, to the applicable permitting authority as described below.
 - (1) The owner or operator must provide notification of the anticipated date for conducting performance tests and visible emission observations. The owner or operator must notify the Administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test must be provided at least 30 days before the observations are scheduled to take place.
 - (2) The owner or operator must provide additional notifications for sources with continuous emission monitoring systems.
- (b) Each owner or operator must submit a notification of compliance status report within 60 days after the compliance dates specified in 40 CFR 63.1501. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in paragraphs (a)(1) through (10) of this section. The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. In a State with an approved operating permit program where delegation of authority under section 112(l) of the CAA has not been requested or approved, the owner or operator must provide duplicate notification to the applicable Regional Administrator. If an owner or operator submits the information specified in this section at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted. A complete notification of compliance status report must include:
 - (1) All information required in 40 CFR 63.9(h). The owner or operator must provide a complete performance test report for each affected source and emission unit for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests).
 - (2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system.
 - (3) Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements.
 - (4) The compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.

- (5) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR 63.1506(c).
 - (6) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR 63.1510(f).
 - (7) Approved OM&M plan.
 - (8) Startup, shutdown, and malfunction plan, with revisions.
- (c) The owner or operator must develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The owner or operator shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan must include:
 - (1) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and
 - (2) Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.
- (d) The owner or operator must submit semiannual reports within 60 days after the end of each 6-month period. Each report must contain the information specified in 40 CFR 63.10(c). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period.

A report must be submitted if any of these conditions occur during a 6-month reporting period:

 - (1) The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.
 - (2) An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter).
 - (3) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3).
 - (4) An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of Subpart RRR.
 - (5) A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.
- (e) The owner or operator must submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods

and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.

- (f) For the purpose of annual certifications of compliance required by 40 CFR part 70 or 71, the owner or operator must certify continuing compliance based upon, but not limited to, the following conditions:
 - (1) Any period of excess emissions, as defined the semiannual report, that occurred during the year were reported as required by this subpart; and
 - (2) All monitoring, Record keeping, and reporting requirements were met during the year.

D.1.26 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Scrap Shredder

- (b) One (1) Scrap Shredder, identified as unit C, constructed in 1998, with a maximum capacity of 25,000 pounds aluminum scrap per hour, with emissions controlled by fabric filter baghouse C (exhausting indoors).

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

Pursuant to CP 003-9243-00286, issued on May 1, 1998, and in order to render the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 not applicable, particulate matter (PM) and PM10 emissions shall not exceed the allowable emission rate of 0.338 pounds per hour.

D.2.2 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the shredder except when otherwise specified in 40 CFR Part 63, Subpart RRR.

D.2.3 Secondary Aluminum Production Limits [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR 63.1505, the owner or operator of a Scrap Shredder shall not discharge or cause to be discharged to the atmosphere PM emissions in excess of 0.01 grains per dry standard cubic foot (gr/dscf).

The Permittee shall be in compliance with the emission limitations and operating requirements by March 24, 2003.

D.2.4 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to CP 003-9243-00286, issued on May 1, 1998, and 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) emissions from the baghouse controlling the shredder shall not exceed 22.27 pounds per hour when operating at a process weight rate of 12.5 tons of metal per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.2.5 Labeling [40 CFR Part 63.1506(b)]

The owner or operator shall provide and maintain easily visible labels that shall be posted at the Scrap Shredder. Said labels shall identify the applicable emission limits and means of compliance, including:

- (a) the type of affected source or emission unit (e.g., scrap dryer/delacquering kiln/decoating kiln, group 1 furnace, group 2 furnace, in-line fluxer); and

- (b) the applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.

D.2.6 Capture and Control Systems [40 CFR Part 63.1506(c)]

Pursuant to 40 CFR 63.1506(c), the owner or operator of the Scrap Shredder must:

- (a) Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (incorporated by reference: 40 CFR 63.1502)
- (b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and
- (c) Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

D.2.7 Operation, Maintenance, and Monitoring (OM&M) Plan [63.1510(b)]

The owner or operator must prepare and implement for each new or existing affected source and emission unit, a written operation, maintenance, and monitoring (OM&M) plan. The owner or operator must submit the plan to the applicable permitting authority no later than the compliance date established in 40 CFR 63.1501(a). Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, the owner or operator must comply with the provisions of the submitted plan. Each plan must contain the following information:

- (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (b) A monitoring schedule for each affected source and emission unit.
- (c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in §63.1505.
- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - (1) Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
 - (2) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in subpart A of this part.
- (e) Procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.

- (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph (b)(1) of this section, including:
 - (1) Procedures to determine and record the cause of an deviation or excursion, and the time the deviation or excursion began and ended; and
 - (2) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

D.2.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its baghouse. If the OM&M plan required by condition D.2.7 is developed in accordance with Section B- Preventive Maintenance Plans, then after the OM&M plan has been approved, it shall satisfy the requirements of this condition.

Compliance Determination Requirements

D.2.9 Particulate Matter (PM) and Capture/Collection Systems [40 CFR 63.1506(c)]

Pursuant to CP-003-9243-00286, issued on May 1, 1998, 40 CFR 63.1506(c), and in order to comply with Conditions D.2.1, D.2.3, and D.2.4, the capture/control system (baghouse) for PM control shall be in operation and control emissions from the Scrap Shredder at all times that the shredder is in operation according to the procedures and requirements of the OM&M plan.

D.2.10 Secondary Aluminum Compliance Determination [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1506(e), the owner operator of a scrap shredder with emissions controlled by a fabric filter must operate a bag leak detection system. Therefore, the owner or operator must:

- (a) Initiate corrective action within 1-hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan.
- (b) Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the owner or operator takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.11 Labeling [40 CFR 63.1510(c)]

The owner or operator shall, for the Scrap Shredder, inspect the labels required in Condition D.2.5 at least once per calendar month to confirm that the posted labels are intact and legible.

D.2.12 Capture/Collection System [63.1510(d)(2)]

The owner or operator shall, for the Scrap Shredder, inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in Condition D.2.6 and record the results of each inspection.

D.2.13 Monitoring Requirements [40 CFR 63.1510(f)]

- (a) These requirements apply to the owner or operator of the scrap shredder:
- (1) The owner or operator must install and operate a bag leak detection system for each exhaust stack of a fabric filter.
 - (2) Each triboelectric bag leak detection system must be installed, calibrated, operated, and maintained according to the "Fabric Filter Bag Leak Detection Guidance," (September 1997). Other bag leak detection systems must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.
 - (3) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
 - (4) The bag leak detection system sensor must provide output of relative or absolute PM loadings.
 - (5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.
 - (6) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.
 - (7) For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.
 - (8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
 - (9) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.
 - (10) Following initial adjustment of the system, the owner or operator must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time except as detailed in the OM&M plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition.

D.2.14 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the scrap shredder at least once per shift when the shredder is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.15 Baghouse Inspections

An inspection shall be performed each calendar quarter of the bags controlling the shredder when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.2.16 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.2.17 Corrective Action [40 CFR 63.1506(p)]

When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established and incorporated in the OM&M plan, the owner or operator shall initiate corrective action. The corrective action taken, shall restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

In addition, the corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level(s) to the applicable value or range of values, and steps to prevent the likely recurrence of the cause of a deviation.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.18 Record Keeping Requirements

- (a) To document compliance with Condition D.2.14, the Permittee shall maintain records of the inlet and outlet differential static pressure once per shift during normal operation when venting to the atmosphere.
- (b) To document compliance with Condition D.2.15, the Permittee shall maintain records of the results of the inspections required under Condition D.2.15 and the dates the vents are redirected.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.19 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1517 the owner or operator shall:

- (a) As required by 40 CFR 63.10(b), the owner or operator shall maintain files of all information (including all reports and notifications) required by the general provisions and Subpart RRR.
- (b) The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.
- (c) The owner or operator may retain records on microfilm, computer disks, magnetic tape, or microfiche; and report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.
- (d) In addition to the general records required by 40 CFR 63.1510(b), the owner or operator of a scrap shredder with emissions controlled by a baghouse must maintain records of:
 - (1) The number of total operating hours for the affected source or emission unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.
 - (2) Records required by 40 CFR 63.10(c) for each continuous monitoring system.
 - (3) Feed/charge (or throughput) weights for each operating cycle or time period used in the performance test.
 - (4) Monthly inspections for proper unit labeling subject to labeling requirements.
 - (5) Annual inspections of emission capture/collection and closed vent systems.
 - (6) Any approved alternative monitoring or test procedure.
 - (7) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (i) Startup, shutdown, and malfunction plan;
 - (ii) For major sources, OM&M plan; and
 - (iii) Site-specific secondary aluminum processing unit emission plan (if applicable).

D.2.20 Secondary Aluminum Production Reporting Requirements [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR 63.1510 and 63.1516 the owner or operator shall:

- (a) Submit initial notifications to the applicable permitting authority as described below.
 - (1) The owner or operator must provide notification of the anticipated date for conducting performance tests and visible emission observations. The owner or operator must notify the Administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of

opacity or visible emission observations for a performance test must be provided at least 30 days before the observations are scheduled to take place.

- (2) The owner or operator must provide additional notifications for sources with continuous emission monitoring systems or continuous opacity monitoring systems.
- (b) Each owner or operator must submit a notification of compliance status report within 60 days after the compliance dates specified in 40 CFR 63.1501. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in paragraphs (a)(1) through (10) of this section.
 - (1) All information required in 40 CFR 63.9(h). The owner or operator must provide a complete performance test report for each affected source and emission unit for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests).
 - (2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system).
 - (3) Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements.
 - (4) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in §63.1506(c).
 - (5) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR 63.1510(f).
 - (6) Startup, shutdown, and malfunction plan, with revisions.
- (c) The owner or operator must develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The owner or operator shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan must include:
 - (1) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and
 - (2) Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.
- (d) The owner or operator must submit semiannual reports within 60 days after the end of each 6-month period. Each report must contain the information specified in 40 CFR 63.10(c). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period.

A report must be submitted if any of these conditions occur during a 6-month reporting period:

- (1) The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.
 - (2) An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, or other approved operating parameter).
 - (3) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3).
 - (4) An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of Subpart RRR.
- (e) For the purpose of annual certifications of compliance required by 40 CFR part 70 or 71, the owner or operator must certify continuing compliance based upon, but not limited to, the following conditions:
- (1) Any period of excess emissions, as defined the semiannual report, that occurred during the year were reported as required by this subpart; and
 - (2) All monitoring, record keeping, and reporting requirements were met during the year.

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Scrap Dryer

- (c) One (1) Scrap Dryer, identified as unit D, constructed in 1998, with a maximum drying capacity of 12,000 pounds aluminum scrap per hour and 6 MMBtu/hr, with emissions controlled by fabric filter baghouse D with manual lime injection and a 12 MMBtu/hr afterburner, and exhausting to stack D.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2][40 CFR 52.21]

Pursuant to CP 003-9243-00286, issued on May 1, 1998, and in order to render the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 not applicable, the particulate matter (PM) and PM10 emissions shall not exceed the allowable emission rate of 4.188 pounds per hour.

D.3.2 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the shredder except when otherwise specified in 40 CFR Part 60, Subpart RRR.

D.3.3 Secondary Aluminum Production Limits [40 CFR Part 63.1505] [40 CFR Part 63.1506]

The scrap dryer is subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR Part 63 Subpart RRR. The owner or operator of a scrap dryer must not discharge or cause to be discharged to the atmosphere emissions in excess of:

- (1) 0.08 pounds of particulate matter (PM) per ton of feed/charge.
- (2) 0.80 pounds of hydrochloric acid (HCl) per ton of feed/charge.
- (3) 0.25 micrograms total polychlorinated dibenzofurans (D/F) international Toxicity Equivalent (TEQ) per megagram (3.5×10^{-6} gr per ton) of feed/charge.
- (4) 0.06 pounds THC (Total Hydrocarbon) per ton of feed/charge.

The Permittee shall be in compliance with the emission limitations and operating requirements by March 24, 2003.

D.3.4 Labeling [40 CFR 63.1506(b)]

On or after the date of approval of the Operation, Maintenance and Monitoring Plan, the Permittee shall provide and maintain easily visible labels posted at the Scrap Dryer. Said labels shall identify the applicable emission limits and means of compliance, including:

- (a) The type of affected source or emission unit (e.g., scrap dryer/delacquering kiln/decoating kiln);
- (b) The applicable operational standard(s) and control method(s) (work practice or control device). This includes the applicable operating parameter ranges and requirements as incorporated in the OM&M plan; and
- (c) The afterburner operating temperature and design residence time.

D.3.5 Feed/Charge Determination [40 CFR 63.1506(d)]

The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The Permittee shall operate each measurement system or other weight determination procedure in accordance with the Operation, Maintenance, and Monitoring Plan. Alternatively, the Permittee may choose to measure and record aluminum production weight from an affected emission unit rather than feed/charge weight provided that the aluminum production weight is measured for all emission units within a secondary aluminum processing unit and all calculations to demonstrate compliance with the emission limits for secondary aluminum processing units are based on aluminum production weight rather than feed/charge weight.

D.3.6 Capture and Control Systems [40 CFR 63.1506(c)][40 CFR 63.1510(d)]

Pursuant to 40 CFR 63.1506(c), the owner or operator of Scrap Dryer must:

- (a) Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (incorporated by reference in 40 CFR 63.1502 of this subpart)
- (b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and
- (c) Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

D.3.7 Operation, Maintenance, and Monitoring (OM&M) Plan [40 CFR 63.1510(b)]

The owner or operator must prepare and implement for the scrap dryer, a written operation, maintenance, and monitoring (OM&M) plan. The owner or operator must submit the plan to the applicable permitting authority no later than the compliance date established in 40 CFR 63.1501(a). Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, the owner or operator must comply with the provisions of the submitted plan. Each plan must contain the following information:

- (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (b) A monitoring schedule for the dryer.
- (c) Procedures for the proper operation and maintenance of the dryer and each add-on control device used to meet the applicable emission limits or standards in 40 CFR 63.1505.
- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - (1) Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
 - (2) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in subpart A of this part.

- (e) Procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
- (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph (b)(1) of this section, including:
 - (1) Procedures to determine and record the cause of an deviation or excursion, and the time the deviation or excursion began and ended; and
 - (2) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

D.3.8 BACT (Best Available Control Technology) Condition

- (a) Pursuant to CP 003-9243-00286 on May 1, 1998, and 326 IAC 8-1-6, the afterburner, determined to be the best available control technology, shall be operated at all times that the Scrap Dryer is in operation. When operating, the afterburner must maintain a minimum VOC capture efficiency of ninety-nine percent (99%) and a minimum VOC destruction efficiency of ninety-nine percent (99%). Compliance with this requirement will render 326 IAC 2-2 and 40 CFR 52.21 not applicable.
- (b) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the afterburner at or above the hourly average temperature of 1,300 degrees Fahrenheit.
- (c) The Permittee shall determine temperature and fan amperage from the most recent valid stack test that demonstrates compliance with limits in (a) of this condition, as approved by IDEM.
- (d) On or after the date the approved stack test results are available, the Permittee shall operate the afterburner at or above the average temperature, residence time, and airflow as observed during the compliant stack test.

D.3.9 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) emissions from the dryer shall not exceed 13.62 pounds per hour when operating at a process weight rate of 6 tons of metal per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.3.10 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its baghouse. If the OM&M plan required by condition D.3.7 is developed in accordance with Section B- Preventive Maintenance Plans, then after the OM&M plan has been approved, it shall satisfy the requirements of this condition.

Compliance Determination Requirements

D.3.11 Fabric Filter Compliance Requirements [40 CFR 63.1506(c)]

Pursuant to CP-003-9243-00286, issued on May 1, 1998, 40 CFR 63.1506(c), and in order to comply with conditions D.3.1, D.3.3, and D.3.9, the owner or operator shall operate fabric filter baghouse at all times the respective dryer is in operation, in accordance with the OM&M plan. The owner or operator must:

- (1) Install, calibrate, maintain, and continuously operate a bag leak detection system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period.
- (2) Maintain the 3-hour block average inlet temperature for each fabric filter at or below the average temperature established during the performance test, plus 14°C (plus 25°F)

D.3.12 Afterburner Compliance Requirements [40 CFR 63.1506(g)]

Pursuant to CP-003-9243-00286, issued on May 1, 1998, 40 CFR 63.1506(g) and in order to comply with condition D.3.8, the owner or operator shall operate the afterburner, determined to be the best available control technology (BACT), at all times the respective dryer is in operation, in accordance with the OM&M plan. For the afterburner, the owner or operator must:

- (1) Maintain the 3-hour block average operating temperature of each afterburner at or above the average temperature established during the performance test
- (2) Operate each afterburner in accordance with the OM&M plan.

D.3.13 VOC Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

Within forty-eight (48) months after issuance of this permit, the Permittee shall perform VOC testing on the Scrap Dryer utilizing methods as approved by the Commissioner to ensure compliance with Condition D.3.8 (326 IAC 8-1-6). This test shall be repeating at least once every five years from the date of this valid compliance demonstration.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.14 Labeling [40 CFR 63.1510(c)]

The owner or operator shall, for the Scrap Dryer, inspect the labels required in Condition D.3.4 at least once per calendar month to confirm that the posted labels are intact and legible.

D.3.15 Capture/Collection System [40 CFR 63.1510(d)(2)]

The owner or operator shall, for the Scrap Dryer, inspect each capture/collection and closed vent system associated with the dryer at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in Conditions D.3.6 and D.3.10 and record the results of each inspection.

D.3.16 Feed/Charge Determination [40 CFR 63.1510(e)]

The owner or operator of the dryer must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the dryer over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured.

D.3.17 Fabric Filter Monitoring Requirements [40 CFR 63.1510(f)]

These requirements apply to the owner or operator of the scrap dryer using a fabric filter with a bag leak detection system.

- (a) The owner or operator must install and operate a bag leak detection system for each exhaust stack of a fabric filter.
- (b) Each triboelectric bag leak detection system must be installed, calibrated, operated, and maintained according to the "Fabric Filter Bag Leak Detection Guidance," (September 1997).
- (c) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
- (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings.
- (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.
- (f) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.
- (g) For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.
- (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
- (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.
- (j) Following initial adjustment of the system, the owner or operator must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time except as detailed in the OM&M plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition.

D.3.18 Afterburner Monitoring Requirements [40 CFR 63.1510(g)]

The owner or operator of an affected source using an afterburner for control shall:

- (a) Install, calibrate, maintain, and operate a device to continuously monitor and record the operating temperature of the afterburner consistent with the requirements of continuous monitoring systems in 40 CFR Part 63 Subpart A.
- (b) The temperature monitoring device must:
 - (1) Be installed at the exit of each afterburner's combustion zone.
 - (2) Record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block period.
 - (3) Have a recorder response range including zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1512(m).
 - (4) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

- (c) Conduct an inspection of each afterburner at least once a year and record the results. At a minimum, an inspection must include:
 - (1) Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;
 - (2) Inspection for proper adjustment of combustion air;
 - (3) Inspection of internal structures (e.g., baffles) to ensure structural integrity;
 - (4) Inspection of dampers, fans, and blowers for proper operation;
 - (5) Inspection for proper sealing;
 - (6) Inspection of motors for proper operation;
 - (7) Inspection of combustion chamber refractory lining and clean and replace lining as necessary;
 - (8) Inspection of afterburner shell for corrosion and/or hot spots;
 - (9) Documentation verifying that, for the burn cycle following the inspection, the afterburner is operating properly and all necessary adjustments have been made;
 - (10) Verification that the equipment is maintained in good operating condition.
 - (11) Following an equipment inspection, all necessary repairs must be completed in accordance with the requirements of the OM&M plan.

D.3.19 Fabric Filter Inlet Temperature Monitoring Requirements [40 CFR 63.1510(h)]

- (a) The owner or operator must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A.
- (b) The temperature monitoring device must meet each of these performance and equipment specifications:
 - (1) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period.
 - (2) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1512(n).
 - (3) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

D.3.20 Corrective Action for 40 CFR 63, Subpart RRR [40 CFR 63.1506(p)]

When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established and incorporated in the OM&M plan, the owner or operator shall initiate corrective action.

The corrective action taken, shall restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as

expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

In addition, the corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level(s) to the applicable value or range of values, and steps to prevent the likely recurrence of the cause of a deviation.

D.3.21 Parametric Monitoring

- (a) The Permittee shall record the total static pressure drop across the baghouses D used in conjunction with the scrap dryer, at least once per shift when the dryer is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.3.22 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the scrap dryer when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

D.3.23 Broken or Failed Bag Detection

In the event that bag failure has been observed.

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B - Emergency Provisions). Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.24 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1517 the owner or operator shall:

- (a) As required by 40 CFR 63.10(b), the owner or operator shall maintain files of all information (including all reports and notifications) required by the general provisions and Subpart RRR.
- (b) The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.
- (c) The owner or operator may retain records on microfilm, computer disks, magnetic tape, or microfiche; and report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.
- (d) In addition to the general records required by 40 CFR 63.1510(b), the owner or operator of a scrap dryer must maintain records of:
 - (1) The number of total operating hours for the affected source or emission unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.
 - (2) For each affected source and emission unit with emissions controlled by a lime-injected fabric filter:
 - (i) Records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken;
 - (ii) If lime feeder setting is monitored, records of daily inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken; and
 - (iii) If lime addition rate for a noncontinuous lime injection system is monitored pursuant to the approved alternative monitoring requirements in 40 CFR 63.1510(v), records of the time and mass of each lime addition during each operating cycle or time period used in the performance test and calculations of the average lime addition rate (lb/ton of feed/charge).
 - (3) 15-minute block average afterburner operating temperature, including any period when the average temperature in any 3-hour block period falls below the compliant operating parameter value with a brief explanation of the cause of the excursion and the corrective action taken; and annual afterburner inspections.
 - (4) 15-minute block average inlet temperatures for each lime-injected fabric filter, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14 °C (+25 °F), with a brief explanation of the cause of the excursion and the corrective action taken

- (5) For each continuous monitoring system, records required by 40 CFR 63.10(c).
- (6) Feed charge (or throughput) weights for each operating cycle or time period used in the performance test.
- (7) Monthly inspections for proper unit labeling subject to labeling requirements.
- (8) Annual inspections of emission capture/collection and closed vent systems.
- (9) Any approved alternative monitoring or test procedure.
- (10) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (i) Startup, shutdown, and malfunction plan;
 - (ii) For major sources, OM&M plan; and
 - (iii) Site-specific secondary aluminum processing unit emission plan (if applicable).

D.3.25 Record Keeping Requirements

- (a) To document compliance with Condition D.3.21, the Permittee shall maintain records of the inlet and outlet differential static pressure once per shift during normal operation when venting to the atmosphere:
- (b) To document compliance with Condition D.3.22, the Permittee shall maintain records of the results of the inspections required under Condition D.3.22 and the dates the vents are redirected.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.26 Secondary Aluminum Production Reporting Requirements [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR 63.1510 and 63.1516 the owner or operator shall:

- (a) Submit initial notifications to the applicable permitting authority as described below.
 - (1) The owner or operator must provide notification of the anticipated date for conducting performance tests and visible emission observations. The owner or operator must notify the Administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test must be provided at least 30 days before the observations are scheduled to take place.
 - (2) The owner or operator must provide additional notifications for sources with continuous emission monitoring systems or continuous opacity monitoring systems.
- (b) Each owner or operator must submit a notification of compliance status report within 60 days after the compliance dates specified in 40 CFR 63.1501. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in paragraphs (a)(1) through (10) of this section. The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. If an owner or operator submits the information specified in this section at different times or in different submittals, later submittals may

refer to earlier submittals instead of duplicating and resubmitting the information previously submitted. A complete notification of compliance status report must include:

- (1) All information required in 40 CFR 63.9(h). The owner or operator must provide a complete performance test report for each affected source and emission unit for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests).
 - (2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system).
 - (3) Unit labeling as described in 40 CFR 63.1506(b), including process type or classification and operating requirements.
 - (4) The compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.
 - (5) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR 63.1506(c).
 - (6) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR 63.1510(f).
 - (7) Approved OM&M plan (including site-specific monitoring plan for each group 1 furnace with no add-on air pollution control device).
 - (8) Startup, shutdown, and malfunction plan, with revisions.
- (c) The owner or operator must develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The owner or operator shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan must include:
- (1) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and
 - (2) Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.
- (d) The owner or operator must submit semiannual reports within 60 days after the end of each 6-month period. Each report must contain the information specified in 40 CFR 63.10(c). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period.

A report must be submitted if any of these conditions occur during a 6-month reporting period:

- (1) The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.
 - (2) An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter).
 - (3) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3).
 - (4) An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of Subpart RRR.
- (e) The owner or operator must submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.
- (f) For the purpose of annual certifications of compliance required by 40 CFR part 70 or 71, the owner or operator must certify continuing compliance based upon, but not limited to, the following conditions:
- (1) Any period of excess emissions, as defined the semiannual report, that occurred during the year were reported as required by this subpart; and
 - (2) All monitoring, record keeping, and reporting requirements were met during the year.

**Indiana Department of Environmental Management
Office of Air Quality**

**Technical Support Document (TSD) for a
Part 70 Minor Source Modification and
a Part 70 Significant Permit Modification**

Source Background and Description

Source Name:	Superior Aluminum Alloys, L.L.C.
Source Location:	14214 Edgerton Road, New Haven, IN 46774
County:	Allen
SIC Code:	3341
Operation Permit No.:	T003-11452-00286
Operation Permit Issuance Date:	June 24, 2002
Minor Source Modification No.:	003-15914-00286
Significant Permit Modification No.:	003-16507-00286
Permit Reviewer:	ERG/BS

The Office of Air Quality (OAQ) has reviewed a modification application from Superior Aluminum Alloys relating to:

- (1) The construction of the following emission units and pollution control devices:

One (1) natural gas-fired Reverberatory Furnace, identified as furnace #4, with a maximum capacity of 28,000 pounds of aluminum scrap per hour, a chlorine flux of 10,233 pounds per eight-hour charge, and a heat input capacity of 28 MMBtu/hr, with emissions controlled by fabric filter baghouse N equipped with continuous lime injection, exhausting to stack N.

- (2) And the removal of (from the operating permit):

One (1) natural gas-fired Rotary Furnace, identified as furnace M, not yet constructed, with a maximum capacity of 12,000 pounds of aluminum scrap per hour, a maximum heat input capacity of 12 MMBtu/hr, and exhausting to stack N.

Note that the Significant Permit Modification also incorporates changes from the 40 CFR Part 63 Subpart RRR final rule compliance amendments promulgated September 24, 2002.

History

Superior Aluminum Alloys received CP 003-9243-00286 to construct a secondary aluminum production plant, consisting of two (2) reverberatory furnaces (identified as furnaces #1 and #2), a scrap dryer, and a scrap shredder on May 1, 1998. On June 7, 2000, the source received SSM 003-11927-00286 to permit the construction of two (2) additional reverberatory furnaces (identified as furnaces #3 and #4) and a rotary furnace (identified as furnace M). On January 29, 2002, the source was issued SSM 003-14739-00286, to replace reverberatory furnaces #1 and #2 which had been diagnosed to have structural failures and were removed.

Superior Aluminum Alloys was issued a Part 70 permit (T003-11452-00286) on June 24, 2002 for the operation of four (4) reverberatory furnaces, one (1) rotary furnace, one (1) scrap dryer, and one (1) scrap shredder. Following issuance of the Part 70 permit, IDEM determined that reverberatory furnace #4 and rotary furnace M would not be constructed within the prescribed construction timeframe required by SSM 003-11927-00286, issued June 7, 2000. As a result, the source informed IDEM that they would submit an application to re-permit the construction of reverberatory furnace #4 and remove rotary furnace (M) from the Part 70 permit. The source submitted an application for these changes on July 19, 2002.

Since the operation of furnace #4 was permitted in T003-11452-00286, issued June 24, 2002, and there are no changes in applicable requirements, the applicable emission limitations have been included in this Minor Source Modification and referenced accordingly.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
N	aluminum melting	40	3	40,000	125

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification and Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on July 19, 2002.

No notice of completeness was mailed to the source.

Emission Calculations

See Appendix A (pages 1 through 2) of this document for detailed emissions calculations.

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE of furnace #4 before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	3065
PM-10	1650
SO ₂	6.7

VOC	15.9
CO	10.3
NO _x	15.9

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Antimony	0.17
Arsenic	0.04
Beryllium	0.01
Cadmium	0.06
Chlorine	0.18
Chromium	0.07
Hydrogen Chloride	28.82
Lead	0.39
Manganese	0.2
Mercury	0.02
Nickel	0.05
Selenium	0.02
TOTAL	30.03

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) PM-10 is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions
This type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2; therefore, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

Justification for Modification

The Part 70 Operating permit (T003-14452-00286) is being modified through a Part 70 Minor Source Modification and Significant Permit Modification. This source modification is being performed pursuant to 326 IAC 2-7-10.5(d)(9) because the potential to emit PM and PM10 is greater than 25 tons per year, and the modification adds an emission unit of the same type that is already permitted which will comply with the same applicable requirements. This permit modification is being performed pursuant to 326 IAC 2-7-12(d). This permit modification does not qualify as a minor permit modification because this is a permit modification under Title I of the CAA.

County Attainment Status

The source is located in Allen County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Allen County has been designated as attainment for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Allen County has been classified as attainment or unclassifiable for all criteria pollutants and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
This type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2; therefore, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited). Note that the chart below represents the source's limited PTE pursuant to T003-11452-00286, issued June 24, 2002, minus emissions from rotary furnace M:

Pollutant	Emissions (tons/year)
PM	12.45
PM-10	12.45
SO ₂	19.41
VOC	23.1
CO	32.43
NOx	58.78

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 100 tons per year or more, as it is one of the 28 listed source categories.
- (b) These emissions are based upon the information provided in the Technical Support Document for the source's Part 70 permit, T003-11452-00286, issued June 24, 2002.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HCl
new Reverberatory Furnace #4 ^(a)	7.5 ^(b)	7.5 ^(b)	8.24	19.52	12.6	19.52	98.12 ^(c)
existing Reverberatory Furnaces #1 through #3 ^(a)							
existing 12 Melt Pots	1.2	1.2	0.09	0.87	13.25	7.88	0
existing Scrap Shredder	1.48	1.48	0	0	0	0	0
existing Scrap Dryer with afterburner	2.1	2.1	11.08	2.71	6.49	31.38	21.0
Fugitive Emissions	0.17	0.03	0	0	0	0	0
Total Source	12.45	12.31	19.41	23.1	32.34	58.78	119.12
PSD Significance Level	100	100	100	100	100	100	NA

(a) Pursuant to T003-11452-00286, issued June 24, 2002, the combined input of aluminum scrap to reverberatory furnaces #1, #2, #3, and #4 shall not exceed 300,000,000 pounds per 12-consecutive month period. This aluminum feed/charge limit, in combination with the unlimited nitrogen oxides (NO_x) emissions from the Scrap Dryer and Melt Pots will effectively limit the source's potential to emit NO_x to less than 100 tons per twelve (12) consecutive month period (PSD major source threshold).

(b) Pursuant to T003-11452-00286, issued June 24, 2002, and in order to render the requirements of 326 IAC 2-2 and 40 CFR 52.21 not applicable, the PM and PM10 emissions from furnace #4 are limited to 0.1 pounds per ton of aluminum produced.

(c) The HCl emissions from furnace #4 are limited to 0.4 pounds per ton aluminum charged pursuant to 40 CFR Part 63 Subpart RRR. The HAP potential to emit presented in the table above is the limited HAP potential to emit from furnaces #1 through #4.

This modification to an existing minor stationary source is not major because the entire source is maintaining its PSD minor status. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) Reverberatory furnace #4 is subject to the National Emission Standards for Hazardous Air Pollutants, for Secondary Aluminum Production, 40 CFR 63.1500 (Subpart RRR), 326 IAC 14, and 326 IAC 20-1-1. Pursuant to 40 CFR 63.1501(b), the owner or operator of a new affected source that commences construction after February 11, 1999 and which began operation after March 24, 2000 must comply with the applicable

requirements of Subpart RRR upon startup. Pursuant to 40 CFR Part 63 subpart RRR, and 326 IAC 20-1-1, furnace #4 is subject to the following conditions:

Emission Limits

- (a) On and after the applicable compliance date established by 40 CFR 63.1501, the Permittee shall comply with the following emission limitations:
 - (1) The PM emission limit (L_{cPM}) for a Group 1 furnace without an in-line fluxer (reverberatory furnace #4) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]
 - (2) The HCl emission limit (L_{cHCl}) for a Group 1 furnace without an in-line fluxer (reverberatory furnace #4) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]
 - (3) The D/F emission limit (L_{cDF}) for a Group 1 furnace without an in-line fluxer (reverberatory furnace #4) at a secondary aluminum production facility shall be 15 Fg of D/F TEQ per Mg (2.1×10^{-4} gr of D/F TEQ per ton) per ton of feed/charge or per ton of aluminum produced. Where TEQ is the toxicity equivalents for dioxins and furans as defined in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update". [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

Operating Requirements

- (a) The Permittee shall provide and maintain easily visible labels at each affected unit that identifies the applicable emission limit and means of compliance [63.1506(b)]. The labels shall include:
 - (1) The type of affected emission unit (i.e., Group 1 Furnace); and
 - (2) The applicable operational standard and control method, including the type of charge to be used in the furnace, flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the Operation, Maintenance, and Monitoring Plan.
- (b) Each affected unit shall be equipped with a capture and collection system that meets the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice." Captured emissions shall be vented through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter. The capture/collection system shall be operated according to the procedures and requirements in the Operation, Maintenance, and Monitoring Plan [63.1506(c)].
- (c) The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The Permittee shall operate each measurement system or other weight determination procedure in accordance with the Operation, Maintenance, and Monitoring Plan. [40 CFR 63.1506(d)]

- (d) For each affected unit, the Permittee shall comply with the following requirements [63.1506(m)]:
 - (1) Regarding the use of bag leak detection systems. The Permittee shall:
 - (A) Initiate corrective action within one (1) hour of a bag leak detection system alarm;
 - (B) Complete the corrective action procedures in accordance with the Operation, Maintenance, and Monitoring Plan; and
 - (C) Operate each fabric filter system such that the bag leak detection system alarm does not sound more than five (5) percent of the operating time during a six (6) month reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than one (1) hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.
 - (2) Maintain the three (3) hour average inlet temperature for each fabric filter at or below the average temperature established during the performance test plus 25 degrees F.
 - (3) For a continuous-lime inject system, the Permittee shall maintain free-flowing alkaline agent in the hopper to the feed device at all times and maintain the alkaline agent feeder setting at the same level established during the performance test. For the purposes of this rule lime means calcium oxide or other alkaline reagent; and lime-injection means the continuous addition of lime upstream of the fabric filter.
 - (4) Maintain the total reactive flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.
- (e) When a process parameter deviates from the value or range established during the performance test and incorporated in the Operation, Maintenance, and Monitoring Plan, the Permittee shall initiate corrective action. The corrective action shall restore operation of the affected emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of the deviation [63.1506(p)].

Monitoring Requirements

- (a) On or after the date of the initial performance test is required to be completed, the Permittee shall monitor all emission units and control equipment according to the following requirements [63.1510(a)]:

The Permittee shall calculate and record the 3-day, 24- hour rolling average emissions of PM, HCl, and D/F for each secondary aluminum processing unit on a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee shall [63.1510(t)]:

- (1) Calculate and record the total weight of material charged to each emission unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed/charge weight data collected as required under Subpart RRR. If the Permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations shall be conducted on the aluminum production weight basis.
- (2) Multiply the total feed/charge weight to the emission unit, or the weight to the emission unit, or the weight of aluminum produced by the emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the emission test) to provide emissions for each emission unit for the 24-hour period, in pounds.
- (3) Divide the total emissions for each secondary aluminum processing unit for the 24-hour period by the total material charged to the secondary aluminum processing unit, or the total weight of aluminum produced by the secondary aluminum processing unit over the 24-hour period to provide the daily emission rate for the secondary emission unit.
- (4) Compute the 24-hour daily emission rate using the equation:

Where,

$$E_{day} = \frac{\sum_{i=1}^n (T_i \times ER_i)}{\sum_{i=1}^n T_i}$$

- | | | |
|-----------|---|--|
| E_{day} | = | The daily respective PM, HCl, or D/F emission rate for the secondary aluminum processing unit for the 24-hour period; |
| T_i | = | The total amount of feed, or aluminum produced, for emission unit i for the 24-hour period in tons; |
| ER_i | = | The measured emission rate for emission unit i as determined in the performance test (lb/ton or ug/Mg or feed/charge); and |
| n | = | The number of emission units in the secondary aluminum processing unit. |

- (5) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3.
- (b) The Permittee shall prepare a written Operation, Maintenance, and Monitoring Plan and shall submit the plan to the applicable permitting authority for review and approval. Any subsequent changes to the plan shall be submitted to the applicable permitting authority for review and approval. Pending approval of the initial or amended plan, the Permittee shall comply with the conditions of the submitted plan. The plan shall include the following information [63.1510(b)]:

- (1) The process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each affected unit and control device.
 - (2) A monitoring schedule for each affected unit.
 - (3) Procedures for the proper operation and maintenance of each affected unit and control device used to meet the applicable emission limit in 40 CFR 63.1505.
 - (4) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - (A) Calibration and certification of accuracy of each monitoring device, at least once every six (6) months, according to the manufacturer's instructions; and
 - (B) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in 40 CFR 63, Subpart A.
 - (5) Procedures for monitoring process and control parameters, including procedures for annual inspections of afterburners, and if applicable, the procedures to be used for determining feed (or throughput) weight if a measurement device is not used.
 - (6) Corrective actions to be taken when process operating parameters or add-on control device parameters deviate from the value or range established in (A) above, including:
 - (A) Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and
 - (B) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date corrective action was completed.
 - (7) A maintenance schedule for each affected unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.
- (c) The Permittee shall inspect the labels for each affected unit at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR 63.1506(b) are intact and legible [63.1510(c)].
- (d) For reverberatory furnace #4 [63.1510(i)]:
- (1) Records shall be kept of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.

- (2) If lime feeder setting is monitored, records shall be kept of daily inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and corrective action taken.
- (e) For the baghouse controlling emissions from reverberatory furnace #4, the Permittee shall install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR 63, Subpart A. The temperature monitoring system shall record the temperature in fifteen (15) minute block averages and calculate and record the temperature for each three (3) hour block period. The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1512(n). The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternative reference approved by the Administrator. [63.1510(h)]
- (f) The Permittee shall install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, each furnace over the same operating cycle or time period used in the performance test. As an alternative to a measurement device, the Permittee may use a procedure acceptable to IDEM, OAQ to determine the total weight of feed or aluminum production for each affected unit. The accuracy of the weight measurement device or procedure shall be within one (1) percent of the weight being measured. The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months [63.1510(e)].
- (g) The Permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system for the baghouse controlling emissions from reverberatory furnace #4 [63.1510(f)].
- (h) When the Permittee uses a continuous lime-injected fabric filter to comply with the requirements of 40 CFR 63, Subpart RRR, then the Permittee shall [63.1510(i)]:
 - (1) Verify that the lime (or other alkaline agent) is always free-flowing by inspecting the feed hopper or silo at least once each eight (8) hour period and recording the results of each inspection. If the lime or other alkaline agent is found not to be free-flowing during any of the eight (8) hour periods, the Permittee shall increase the frequency of inspections to at least once every four (4) hour period for the next three (3) days. The Permittee may return to inspections at least once every eight (8) hour period if corrective action results in no further blockages of lime or other alkaline agent during the three (3) day period; or
 - (2) The Permittee shall also record the feeder setting once each day of operation.
- (i) Pursuant to 63.1510(j), the Permittee shall:
 - (1) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of flux injected into each affected unit. The monitoring system must record the weight for each fifteen (15) minute period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test. The

accuracy of the weight measurement shall be within one (1) percent of the weight of the reactive component of the flux being measured. The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.

- (2) Calculate and record the flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test.
- (3) Record, for each fifteen (15) minute time period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of reactive flux.
- (4) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test.

The completion of the initial performance tests for the secondary aluminum processing units shall be considered to be the date of approval of the Operation, Maintenance and Monitoring Plan by IDEM, OAQ [63.1506(a)(2)].

Performance Tests

- (a) Prior to conducting the performance test required by 40 CFR 63, Subpart RRR, the Permittee shall prepare and submit a site-specific test plan in compliance with 40 CFR 63.7(c). Following approval of the site-specific test plan, the Permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected unit and report the results in the notification of compliance report. The Permittee shall conduct performance tests in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. The Permittee shall use Method 23 in Appendix A to 40 CFR 60 or an alternative method approved by the Administrator to measure the concentration of D/F.

The Permittee shall notify the Administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test shall be provided at least 30 days before the observations are scheduled to take place [63.1511(a)].

- (b) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [40 CFR 63.1511(g)].

Notifications

- (a) Pursuant to 40 CFR 63, Subpart A, the Permittee must submit an initial notification to IDEM, OAQ upon startup of reverberatory furnace #4. The initial notification shall contain:
 - (1) The name and address of the owner or operator;
 - (2) The address (i.e., physical location) of the emission units;

- (3) An identification of the relevant standard, or other requirement, that is the basis of the notification and the date on which the source is required to be in compliance; and
 - (4) A statement indicating whether the source is a major source or an area source.
- (b) Pursuant to 40 CFR 63.1515(b), the Permittee shall submit a notification of compliance status reports no more than 60 days after March 24, 2003 for reverberatory furnace #4. The notification must be signed by the responsible official who must certify its accuracy. The report shall include:
- (1) All information required in 40 CFR 63.9(h). The Permittee shall provide a complete performance test report for each affected unit, including data, associated measurements, and calculations.
 - (2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system.
 - (3) Unit labeling as described in 40 CFR 63.1506(b), including process type or each affected unit classification and operating requirements.
 - (4) The compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value (e.g., alkaline agent injection rate, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.
 - (5) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for the capture/collection system required in 40 CFR 63.1506(c).
 - (6) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems required in 40 CFR 63.1510(f).
 - (7) Approved Operation, Maintenance, and Monitoring Plan.
 - (8) Startup, shutdown, and malfunction plan.

Reports

- (a) The Permittee shall develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the emission limit. The Permittee shall keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during startup, shutdown, or malfunction is not consistent with the procedures in the startup, shutdown, and malfunction plan. The plan shall include [63.1516(a)].
- (1) The procedures to determine and record the cause of a malfunction and the time the malfunction began and ended; and
 - (2) Corrective actions to be taken in the event of a malfunction of a process or control device, including the actions taken to correct the malfunction or minimize emissions.

- (b) The Permittee shall submit a semi-annual report within 60 days after the end of each six (6) month period detailing all deviations from the Operation, Maintenance, and Monitoring Plan. When no deviations have occurred, the Permittee shall submit a report stating that no excess emissions occurred during the reporting period. A report shall be submitted if any following conditions occur [63.1516(b)]:
- (1) An excursion of a compliant process or operating parameter value or range.
 - (2) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan.
 - (3) A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.

The Permittee shall submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.

Records

The Permittee shall maintain files of all information, including reports and notifications, required by 40 CFR 63.10 and 40 CFR 63.1517. The Permittee shall retain each record for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent two (2) years of records shall be retained at the source. The remaining three (3) years of records may be retained off-site. The Permittee may retain records on microfilm, computer disks, magnetic tape or microfiche.

In addition to the general records required by 40 CFR 60.10(b), the Permittee shall maintain:

- (a) The number of total operating hours for the affected source or emission unit during each 6 month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.
- (b) For each affected unit with emissions controlled by a lime-injected fabric filter, records of 15-minute block average inlet temperatures for each lime-injected fabric filter, including any period when 3-hour block average temperature exceeds the compliant operating parameter value +25 degrees F, with a brief explanation of the cause of the excursion and the corrective action taken.
- (c) For each emission unit with emissions controlled by a lime-injected fabric filter:
 - (1) Records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a

brief explanation of the cause of the blockage and the corrective action taken;

- (2) If lime feeder setting is monitored, records of daily inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and corrective action taken.
- (d) For each Group 1 furnace, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid, or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.
- (e) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.
- (f) Records of any approved alternative monitoring or test procedure.
- (g) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (1) Startup, shutdown, and malfunction plan;
 - (2) Operation, Maintenance, and Monitoring Plan; and
 - (3) Site-specific secondary aluminum processing unit emission plan.
- (h) For each secondary aluminum processing unit, records of total charge weight, or if the Permittee chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.

The provisions of 40 CFR 63 subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 subpart RRR.

- (c) The requirements of Section 112(j) of the Clean Air Act (40 CFR Part 63.50 through 63.56) are not applicable to this source because the source does not include one or more units that belong to one or more source categories affected by the Section 112(j) MACT Hammer date of May 15, 2002.
- (d) Reverberatory furnace #4 is subject to the provisions of 40 CFR Part 64, Compliance Assurance Monitoring (CAM). In order for this rule to apply, a specific emissions unit must meet three criteria for a given pollutant: 1) the unit is subject to an emission limitation or standard for the applicable regulated air pollutant, 2) the unit uses a control device to achieve compliance with any such emission limitation or standard, and, 3) the unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal or greater than 100 percent of the amount required for a source to be classified as a major source. Reverberatory furnace #4 requires the use of a baghouse to achieve compliance with the respective PM emission limitations and has an uncontrolled potential to emit PM greater than 100 tons per year. Therefore, reverberatory furnace #4 is subject to the requirements of 40 CFR Part 64. However, pursuant to 40 CFR 64.2(b)(1)(i), the 40 CFR Part 63 Subpart RRR requirements applicable to furnace #4 (and existing furnaces #1 through #3, the scrap dryer, and scrap shredder) satisfy the requirements of 40 CFR Part 64.

State Rule Applicability - Reverberatory furnace #4

326 IAC 2-2 (Prevention of Significant Deterioration)

Pursuant to T003-11452-00286, issued June 24, 2002, the following conditions apply to reverberatory furnace #4:

- (a) The combined input of aluminum scrap to reverberatory furnaces #1, #2, #3, and #4 shall not exceed 300,000,000 pounds per twelve consecutive month period. This aluminum feed/charge limit, in combination with the unlimited NO_x emissions from the existing Scrap Dryer and Melt Pots, will effectively limit the source's potential to emit nitrogen oxides (NO_x) to less than 100 tons per twelve (12) consecutive month period.
- (b) NO_x emissions from each of the reverberatory furnaces #1, #2, #3, and #4 shall not exceed 0.25 pounds per ton of aluminum charged and 0.01 pounds per ton of aluminum poured/cast.
- (c) The amount of flux used in each furnace shall be limited to 11,205,135 pounds per twelve consecutive month period.
- (d) The PM emissions from each furnace (reverberatory furnaces #1 through #4) shall not exceed 0.1 pounds per ton aluminum melted.
- (e) The PM10 emissions from each furnace (reverberatory furnaces #1 through #4) shall not exceed 0.1 pounds per ton aluminum melted.

Compliance with these limits render the requirements of 326 IAC 2-2 and 40 CFR 52.21 (Prevention of Significant Deterioration) not applicable.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

Reverberatory furnace #4 has the potential to emit levels of hazardous air pollutants (HAPs) greater than those that constitute major source applicability according to Section 112 of the 1990 Clean Air Act. However, furnace #4 is subject to the provisions of 40 CFR 63 Subpart RRR (National Emission Standards for Hazardous Air Pollutants, for Secondary Aluminum Production). Therefore, compliance with 40 CFR Part 63 Subpart RRR satisfies the requirements of 326 IAC 2-4.1.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-3 (Process Operations)

Pursuant to T003-11452-00286, issued June 24, 2002, and 326 IAC 6-3-2, particulate emissions from reverberatory furnace #4, when operating at a process weight of 14 tons per hour, shall be limited to 24.0 pounds per hour based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)

The requirements of 326 IAC 7-1.1-2 are not applicable to reverberatory furnace #4 because it has a potential to emit sulfur dioxide (SO₂) less than twenty-five (25) tons per year.

326 IAC 8-1-6 (Volatile Organic Compounds)

The requirements of 326 IAC 8-1-6 are not applicable to reverberatory furnace #4 because it has a potential to emit volatile organic compounds (VOC) less than twenty-five (25) tons per year.

Testing Requirements

Within 180 days after startup, the Permittee shall perform PM and PM10 testing on baghouse N, and NO_x, HCl, and D/F testing on reverberatory furnace #4, using methods as approved by the Commissioner, in order to demonstrate compliance with 40 CFR Part 63 Subpart RRR, 40 CFR 52.21, and 326 IAC 2-2. When testing baghouse N, reverberatory furnace #4 shall be operated at 95% or more of its maximum design capacity. PM10 includes filterable and condensable PM10. Testing shall be conducted in accordance with Section C- Performance Testing.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

- (a) The Permittee shall record the total static pressure drop across the baghouse controlling emissions from reverberatory furnace #4 at least once per shift when those facilities are in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 1.0 to 8.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) An inspection shall be performed each calendar quarter of all bags controlling emissions from reverberatory furnace #4 when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents

to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

These monitoring conditions (and those listed under *Federal Rule Applicability*) are necessary because the baghouse for reverberatory furnace #4 must operate properly to ensure compliance with 40 CFR Part 63 Subpart RRR, 326 IAC 2-2, 326 IAC 6-3 and 326 IAC 2-7 (Part 70).

Proposed Changes

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (a) Four (4) natural gas-fired Reverberatory Furnaces, identified as furnace #1 (~~to be constructed~~ **constructed in 2002**), furnace #2 (~~to be constructed~~ **constructed in 2001**), furnace #3 (constructed in 2000) and furnace #4 (to be constructed), each with: a maximum capacity of 28,000 pounds of aluminum scrap per hour, chlorine flux of 10,233 pounds per eight-hour charge, and a heat input capacity of 28 MMBtu/hr, emissions controlled by four (4) fabric filter baghouses with lime injection (baghouses E and F are manually lime injected, baghouses L and N are equipped with continuous lime injection), with furnaces #1 and #2 exhausting to stacks E and F, furnace #3 exhausting to stack L, and furnace #4 exhausting to stack N, respectively.
- ~~(b) One (1) natural gas-fired Rotary Furnace, identified as furnace M, to be constructed, with a maximum capacity of 12,000 pounds of aluminum scrap per hour and a maximum heat input capacity of 12 MMBtu/hr, with emissions controlled by fabric filter baghouse N equipped with continuous lime injection, and exhausting to stack N.~~
- (e b) One (1) Scrap Shredder, identified as unit C, constructed in 1998, with a maximum capacity of 25,000 pounds aluminum scrap per hour, with emissions controlled by fabric filter baghouse C (exhausting indoors).
- (~~d~~ c) One (1) Scrap Dryer, identified as unit D, constructed in 1998, with a maximum drying capacity of 12,000 pounds aluminum scrap per hour and 6 MMBtu/hr, with emissions controlled by fabric filter baghouse D with manual lime injection and a 12 MMBtu/hr afterburner, and exhausting to stack D.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Furnaces

- (a) Four (4) natural gas-fired Reverberatory Furnaces, identified as furnace #1 (~~to be constructed~~ **constructed in 2002**), furnace #2 (~~to be constructed~~ **constructed in 2001**), furnace #3 (constructed in 2000) and furnace #4 (to be constructed), each with: a maximum capacity of 28,000 pounds of aluminum scrap per hour, chlorine flux of 10,233 pounds per eight-hour charge, and a heat input capacity of 28 MMBtu/hr, emissions controlled by four (4) fabric filter baghouses with lime injection (baghouses E and F are manually lime injected, baghouses L and N are equipped with continuous lime injection), with furnaces #1 and #2 exhausting to stacks E and F, furnace #3 exhausting to stack L, and furnace #4 exhausting to stack N, respectively.
- (b) ~~One (1) natural gas-fired Rotary Furnace, identified as furnace M, to be constructed, with a maximum capacity of 12,000 pounds of aluminum scrap per hour and a maximum heat input capacity of 12 MMBtu/hr, with emissions controlled by fabric filter baghouse N equipped with continuous lime injection, and exhausting to stack N.~~

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] [40 CFR 52.21]

The following conditions apply to Reverberatory Furnaces #1 through #4 and Rotary Furnace M:

- (a) The combined input of aluminum scrap to reverberatory furnaces #1, #2, #3, and #4 shall not exceed 300,000,000 pounds per twelve consecutive month period. This aluminum feed/charge limit, in combination with the ~~unlimited NO_x emission rate from the Rotary Furnace~~ and unlimited NO_x emissions from the Scrap Dryer, and Melt Pots, will effectively limit the source's potential to emit nitrogen oxides (NO_x) to less than 100 tons per twelve (12) consecutive month period **with compliance determined at the end of each month.**
- (b) NO_x emissions from each of the reverberatory furnaces #1, #2, #3, and #4 shall not exceed 0.25 pounds per ton of aluminum charged and 0.01 pounds per ton of aluminum poured/cast.
- (c) The amount of flux used in each furnace shall be limited to 11,205,135 pounds per twelve consecutive month period **with compliance determined at the end of each month.**
- (d) The PM emissions from each furnace (Reverberatory Furnaces #1 through #4 and ~~Rotary Furnace M~~) shall not exceed 0.1 pounds per ton aluminum melted.
- (e) The PM10 emissions from each furnace (Reverberatory Furnaces #1 through #4 and ~~Rotary Furnace M~~) shall not exceed 0.1 pounds per ton aluminum melted.

Compliance with these limits render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.1.2 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to reverberatory furnaces #1, #2, #3, and #4 and ~~Rotary Furnace M~~ except when otherwise specified in 40 CFR Part 63, Subpart RRR.

D.1.3 Secondary Aluminum Smelting Limits [40 CFR Part 63.1500 (Subpart RRR)]

Pursuant to 40 CFR Part 63.1505, the following conditions shall apply to the reverberatory furnaces #1, #2, #3, and #4 and Rotary Furnace M.

- (a) The Permittee shall be in compliance with the following emission limitations and operating requirements upon startup:
- (1) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of PM in excess of:

$$L_{cPM} = \frac{\sum_{i=1}^n (L_{tiPM} \times T_{ti})}{\sum_{i=1}^n T_{ti}}$$

where L_{tiPM} = The PM emission limit for individual emission unit I in paragraph (i)(1) and (2) of 40 CFR 63.1505.
 T_{ti} = The feed/charge rate for individual emission unit I; and
 L_{cPM} = The PM emission limit for secondary aluminum processing unit I.

The PM emission limit (L_{cPM}) for a Group 1 furnace without an in-line fluxer (each reverberatory furnace and Rotary Furnace M) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

- (2) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of HCl in excess of:

$$L_{cHCl} = \frac{\sum_{i=1}^n (L_{tiHCl} \times T_{ti})}{\sum_{i=1}^n T_{ti}}$$

where L_{tiHCl} = The HCl emission limit for individual emission unit I in paragraph (i)(4) of 40 CFR 63.1505.
 T_{ti} = The feed/charge rate for individual emission unit I; and
 L_{cHCl} = The HCl emission limit for secondary aluminum processing unit I.

The HCl emission limit (L_{cHCl}) for a Group 1 furnace without an in-line fluxer (each reverberatory furnace and Rotary Furnace M) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

- (3) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of total tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans (D/F) in excess of:

$$L_{cDF} = \frac{\sum_{i=l}^n (L_{iDF} \times T_{ii})}{\sum_{i=l}^n T_{ii}}$$

where L_{iDF} = The D/F emission limit for individual emission unit in the secondary aluminum processing unit; and
 L_{cDF} = The D/F emission limit for secondary aluminum processing unit.

The D/F emission limit (L_{cDF}) for a Group 1 furnace without an in-line fluxer (Reverberatory Furnaces #1 through #4 and Rotary Furnace M) at a secondary aluminum production facility shall be 15 micrograms of D/F TEQ per megagram (2.1×10^{-4} gr of D/F TEQ per ton) of feed/charge. Where TEQ is the toxicity equivalents for dioxins and furans as defined in 40 CFR 60.2125 (July 2001) [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

- (b) Identification, emission limits and means of compliance shall be posted on the reverberatory furnaces #1, #2, #3, and #4 and rotary furnace M.

D.1.6 Operation, Maintenance, and Monitoring (OM&M) Plan [63.1510(b)]

The owner or operator must prepare and implement for each furnace, scrap shredder and scrap dryer and emission unit, a written operation, maintenance, and monitoring (OM&M) plan. The owner or operator must submit the plan to the applicable permitting authority for review and approval as part of the application for a part 70 or part 71 permit **within 90 days after a successful initial performance test under 40 CFR 63.1511(b)**. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, the owner or operator must comply with the provisions of the submitted plan. Each plan must contain the following information:

D.1.7 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Process Operations **Particulate Emission Limitations for Manufacturing Processes**), the following conditions shall apply:

- (a) ~~The allowable particulate matter (PM) emissions rate from each of the reverberatory furnaces shall not exceed 24.0 pounds per hour when operating at a process weight rate of 14.0 tons of per hour.~~
- (b) ~~The particulate matter (PM) emissions from rotary furnace M shall not exceed 13.6 pounds per hour when operating at a process weight rate of 6.0 tons per hour.~~

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.9 Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 63 Subpart RRR]

- (a) In order to demonstrate compliance with 40 CFR Part 63 Subpart RRR, 40 CFR 52.21, and 326 IAC 2-2, the Permittee shall, within ~~180~~ **90** days after startup, perform PM and

PM10 testing on baghouses E, F, and N, and NO_x, HCl, and D/F testing on reverberatory furnaces #1, #2, ~~and #4, and rotary furnace M~~, using methods as approved by the Commissioner, in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. When testing baghouses E and F, reverberatory furnaces #1 and #2 shall be operated at 95% or more of their maximum design capacities. When testing baghouse N, ~~the rotary furnace N~~ and reverberatory furnace #4 shall be operated at 95% or more of its maximum design capacity. PM10 includes filterable and condensable PM10. Testing shall be conducted in accordance with Section C - Performance Testing. These tests shall be repeated every two and one-half (2.5) years.

- (b) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [63.1511(g)].

D.1.10 Particulate Matter (PM) and Capture/Collection Systems [40 CFR 63.1506(c)]

Pursuant to CP-003-9243-00286, issued on May 1, 1998, Source Modification 003-11927-00286, issued on June 7, 2000, and in order to comply with Conditions D.1.1, D.1.3, D.1.5, and D.1.7, the capture/control system (baghouses) for PM control shall be in operation and control emissions from the furnaces at all times that the furnaces are in operation according to the procedures and requirements of the OM&M plan. Baghouse L for PM control shall be in operation and control emissions from furnace #3 at all times when furnace #3 is in operation. Baghouse N for PM control shall be in operation and control emissions from ~~the rotary furnace~~ and furnace #4 at all times when ~~the furnaces are~~ **furnace #4 is** in operation. It is acceptable to operate only one of the baghouses E or F if only one of the two reverberatory furnaces #1 and #2 is operating. If both reverberatory furnaces #1 and #2 are operating, then both baghouses E and F must be operated.

D.1.12 Secondary Aluminum Smelting Compliance Determination [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1510, the following conditions shall apply to reverberatory furnaces #1, #2, #3, ~~and #4, and rotary furnace M~~:

D.1.16 Fabric Filter Monitoring Requirements [40 CFR 63.1510(f)]

These requirements apply to the owner or operator of each reverberatory ~~and rotary~~ furnace listed in this section.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Scrap Shredder

- (e b) One (1) Scrap Shredder, identified as unit C, constructed in 1998, with a maximum capacity of 25,000 pounds aluminum scrap per hour, with emissions controlled by fabric filter baghouse C (exhausting indoors).

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.2.7 Operation, Maintenance, and Monitoring (OM&M) Plan [63.1510(b)]

The owner or operator must prepare and implement for each new or existing affected source and emission unit, a written operation, maintenance, and monitoring (OM&M) plan. The owner or operator must submit the plan to the applicable permitting authority for review and approval ~~as part of the application for a part 70 or part 71 permit~~ **no later than the compliance date established in 40 CFR 63.1501(a)**. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable

permitting authority of an initial or amended plan, the owner or operator must comply with the provisions of the submitted plan. Each plan must contain the following information:

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Scrap Dryer

- (c) One (1) Scrap Dryer, identified as unit D, constructed in 1998, with a maximum drying capacity of 12,000 pounds aluminum scrap per hour and 6 MMBtu/hr, with emissions controlled by fabric filter baghouse D with manual lime injection and a 12 MMBtu/hr afterburner, and exhausting to stack D.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.3.7 Operation, Maintenance, and Monitoring (OM&M) Plan [40 CFR 63.1510(b)]

The owner or operator must prepare and implement for the scrap dryer, a written operation, maintenance, and monitoring (OM&M) plan. The owner or operator must submit the plan to the applicable permitting authority for review and approval as part of the application for a part 70 or part 71 permit **no later than the compliance date established in 40 CFR 63.1501(a)**. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, the owner or operator must comply with the provisions of the submitted plan. Each plan must contain the following information:

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 003-15914-00286.

Appendix A: Secondary Aluminum Production

Reverberatory Furnaces

Company Name: Superior Aluminum Alloys, L.L.C
Address City IN Zip: 14214 Edgerton Road, New Haven, Indiana 46774
permit #: 003-15914-00286
Reviewer: ERG/BS
Date: 08/18/2002

Reverberatory Furnace #4

SCC# 3-04-001-03

Charging/Melting

TYPE OF MATERIAL	Number of Units	Throughput LBS/HR	1 TON/2000 lbs	TON/HR	
Aluminum	1	28000	2000	14	
	PM *	PM10 *	SOx "	NOx ***	VOC **
	lbs/ton metal charged	lbs/ton metal charged	lbs/ton metal charged	lbs/ton metal charged	lbs/ton metal charged
	4.3	2.6	0.09	0.25	0.12
Potential Emissions lbs/hr	60.2	36.4	1.3	3.5	1.7
Potential Emissions lbs/day	1444.8	873.6	30.2	84.0	40.3
Potential Emissions tons/year	263.7	139.4	5.5	15.3	7.4

SCC# 3-04-001-04

Fluxing/Chlorine

TYPE OF MATERIAL	Number of Units	Throughput LBS/HR	1 TON/2000 lbs	TON/HR	
Flux	1	1279.125	2000	0.6395625	
	PM *	PM10 *	SOx	NOx	VOC
	lbs/ton Chlorine	lbs/ton Chlorine	lbs/ton Chlorine	lbs/ton Chlorine	lbs/ton Chlorine
	1000	532	0.00	0.00	0.00
Potential Emissions lbs/hr	639.6	340.2	0.0	0.0	0.0
Potential Emissions lbs/day	15349.5	8165.9	0.0	0.0	0.0
Potential Emissions tons/year	2801.3	1490.3	0.0	0.0	0.0

SCC# 3-04-001-14

Pouring/Casting

TYPE OF MATERIAL	Number of Units	Throughput LBS/HR	1 TON/2000 lbs	TON/HR	
Aluminum	1	28000	2000	14	
	PM	PM10	SOx *	NOx *	VOC *
	lbs/ton metal charged	lbs/ton metal charged	lbs/ton metal charged	lbs/ton metal charged	lbs/ton metal charged
	--	--	0.02	0.01	0.14
Potential Emissions lbs/hr	0	0	0.28	0.140	1.960
Potential Emissions lbs/day	0	0	6.72	3.360	47.040
Potential Emissions tons/year	0	0	1.2	0.6	8.6
Total Controlled Emissions (tons/yr)****	1.80	1.80	6.7	15.9	15.9

* Note: Emission factor is from FIRE version 6.01.

** Based on Reverberatory #3 compliance testing on 1/10/2000

*** Based on emission limit guaranteed by the manufacturer

**** Controlled PM emissions are based on expected grain loading and volumetric flow rates.

" Based on stack test conducted by Wabash Alloys on a similar process. This EF was used to estimate emissions from the furnaces in the original construction permit.

^ The CO emissions are from natural gas combustion. The emission factor was determined using the AP-42 factor for natural gas combustion and furnace specifications.

Emission factors which are not otherwise footnoted are from the permit application and have been accepted either via the Part 70 permit or from a test report used for draft NESHAP.

CO ^	
lbs/ton metal charged	0.168
2.4	
56.4	
10.3	
CO	
lbs/tons Chlorine	-
-	
-	
-	
-	
CO	
lbs/tons metal fed	-
-	
-	
-	
-	
10.3	

Appendix A: Secondary Aluminum Production

Reverberatory Furnaces

Company Name: Superior Aluminum Alloys, L.L.C
Address City IN Zip: 14214 Edgerton Road, New Haven, Indiana 46774
permit #: 003-15914-00286
Reviewer: ERG/BS
Date: 08/18/2002

Reverberatory Furnace #4

SCC# 3-04-001-03

Charging/Melting

TYPE OF MATERIAL	Number of Units	Throughput LBS/HR	1 TON/2000 lbs	TON/HR	
Aluminum	1	28000	2000	14	
	PM *	PM10 *	SOx "	NOx ***	VOC **
	lbs/ton metal charged	lbs/ton metal charged	lbs/ton metal charged	lbs/ton metal charged	lbs/ton metal charged
	4.3	2.6	0.09	0.25	0.12
Potential Emissions lbs/hr	60.2	36.4	1.3	3.5	1.7
Potential Emissions lbs/day	1444.8	873.6	30.2	84.0	40.3
Potential Emissions tons/year	263.7	139.4	5.5	15.3	7.4

SCC# 3-04-001-04

Fluxing/Chlorine

TYPE OF MATERIAL	Number of Units	Throughput LBS/HR	1 TON/2000 lbs	TON/HR	
Flux	1	1279.125	2000	0.6395625	
	PM *	PM10 *	SOx	NOx	VOC
	lbs/ton Chlorine	lbs/ton Chlorine	lbs/ton Chlorine	lbs/ton Chlorine	lbs/ton Chlorine
	1000	532	0.00	0.00	0.00
Potential Emissions lbs/hr	639.6	340.2	0.0	0.0	0.0
Potential Emissions lbs/day	15349.5	8165.9	0.0	0.0	0.0
Potential Emissions tons/year	2801.3	1490.3	0.0	0.0	0.0

SCC# 3-04-001-14

Pouring/Casting

TYPE OF MATERIAL	Number of Units	Throughput LBS/HR	1 TON/2000 lbs	TON/HR	
Aluminum	1	28000	2000	14	
	PM	PM10	SOx *	NOx *	VOC *
	lbs/ton metal charged	lbs/ton metal charged	lbs/ton metal charged	lbs/ton metal charged	lbs/ton metal charged
	--	--	0.02	0.01	0.14
Potential Emissions lbs/hr	0	0	0.28	0.140	1.960
Potential Emissions lbs/day	0	0	6.72	3.360	47.040
Potential Emissions tons/year	0	0	1.2	0.6	8.6
Total Controlled Emissions (tons/yr)****	1.80	1.80	6.7	15.9	15.9

* Note: Emission factor is from FIRE version 6.01.

** Based on Reverberatory #3 compliance testing on 1/10/2000

*** Based on emission limit guaranteed by the manufacturer

**** Controlled PM emissions are based on expected grain loading and volumetric flow rates.

" Based on stack test conducted by Wabash Alloys on a similar process. This EF was used to estimate emissions from the furnaces in the original construction permit.

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CO ^	
lbs/ton metal charged	0.168
2.4	
56.4	
10.3	
CO	
lbs/tons Chlorine	-
-	
-	
-	
-	
CO	
lbs/tons metal fed	-
-	
-	
-	
-	
10.3	